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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/583,413

06/20/2006

Naohiro Yoshida

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25944 7590 09/16/2010  
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EXAMINER

CHUO, TONY SHENG HSIANG

ART UNIT

PAPER NUMBER

1795

NOTIFICATION DATE

DELIVERY MODE

09/16/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

OfficeAction25944@oliff.com  
jarmstrong@oliff.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/583,413	<b>Applicant(s)</b> YOSHIDA, NAOHIRO	
	<b>Examiner</b> Tony Chuo	<b>Art Unit</b> 1795	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 20,22,26,27,32,33 and 35-38 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 20,22,26,27,32,33 and 35-38 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/30/10 has been entered.

### ***Response to Amendment***

2. Claims 20, 22, 26, 27, 32, 33, and 35-38 are currently pending. Claims 1-19, 21, 23-25, 28-31, and 34 are cancelled. New claims 37 and 38 have been added. The previous objection to claims 35 and 36 is withdrawn. The previously stated 112, 2<sup>nd</sup> paragraph rejection of claims 20, 22, 23, 25-27, 35 and 36 is withdrawn. The amended claims do overcome the previously stated 102 and 103 rejections. However, upon further consideration, claims 20, 22, 26, 27, 32, 33, and 35-38 are rejected under the following new 112 rejection.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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4. Claims 20, 22, 26, 27, 32, 33, and 35-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear whether “a third reference value” is referring to “a second determining reference value” described on page 13 of the specification and “a predetermined value” is referring to “a first determining reference value” described on page 12 of the specification.

For the purpose of clarity, the following changes to claims 20 and 32 are suggested by the examiner.

On the first page of claim 20, line 5, the phrase “determining means for determining” should be changed to “a controller programmed to determine”.

On the first page of claim 20, line 10, the phrase "determining means includes" should be changed to "the controller communicates with".

On the first page of claim 20, line 18, the phrase “consumption amount determining means for determining” should be changed to “consumption amount calculating means for calculating”.

On the second page of claim 20, line 1-3, the phrase “chemical short possibility determining means for determining that there is a possibility that the chemical short is occurring when the determined consumption amount is greater than a third reference value” should be changed to “wherein the controller determines that there is a possibility that the chemical short is occurring when the consumption amount is greater than a first reference value”.

On the second page of claim 20, lines 4-11, the phrase “wherein the determining means determines again, when it has been determined that there is a possibility that the chemical short is occurring, whether there is a possibility that the chemical short is occurring and the scavenging means supplies the scavenging gas to the cathode side when it has been determined again that there is a possibility that the chemical short is occurring, and the determining means sets the third reference value smaller than a predetermined value when it has been determined again that there is a possibility that the chemical short is occurring” should be changed to “wherein, when it has been determined that there is a possibility that the chemical short is occurring, the controller determines again whether there is a possibility that the chemical short is occurring by calculating a second consumption amount of the oxidization gas on the cathode side and determining whether the second consumption amount is greater than a second reference value that is set to a value smaller than the first reference value, and wherein the scavenging means supplies the scavenging gas to the cathode side when the second consumption amount is greater than the second reference value”.

On the first page of claim 32, line 16, the word “determining” should be changed to “calculating”.

On the first page of claim 32, lines 18 and 19, the phrase “determined consumption amount is greater than a third reference value” should be changed to “calculated consumption amount is greater than a first reference value”.

On the second page of claim 32, lines 1-8, the phrase “wherein, when it has been determined that there was the possibility that the chemical short is occurring, it is again

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determined whether there is a possibility that the chemical short is occurring, and the scavenging gas is supplied again to the cathode side when it has been determined again that there is a possibility that the chemical short is occurring, and the determining whether there is a possibility that a chemical short is occurring sets the third reference value smaller than a predetermined value when it has been determined again that there is a possibility that the chemical short is occurring" should be changed to "wherein, when it has been determined that there is a possibility that the chemical short is occurring, it is determined again whether there is a possibility that the chemical short is occurring by calculating a second consumption amount of the oxidization gas on the cathode side and determining whether the second consumption amount is greater than a second reference value that is set to a value smaller than the first reference value, and the scavenging gas is supplied again to the cathode side when the second consumption amount is greater than the second reference value".

***Allowable Subject Matter***

5. Claims 20, 22, 26, 27, 32, 33, and 35-38 are allowable if the 112, 2<sup>nd</sup> paragraph rejection is obviated.

The Yoshida reference discloses a fuel cell system comprising a fuel cell stack "10" which generates electricity by a chemical reaction between hydrogen (fuel gas) supplied to an anode side of the fuel cell stack and air (oxidization gas) supplied to a cathode side of the fuel cell stack; a control unit "100" that determines whether hydrogen migration through the electrolyte membrane (chemical short) is occurring in

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the fuel cell during the intermittent operation mode when the supply of fuel gas and oxidization gas to the fuel cell is stopped; a compressor "41" for supplying a small amount of air (scavenging gas) to the cathode side that is less than the amount of air supplied to the cathode side when the fuel cell is idling when it has been determined that there is hydrogen migration through the electrolyte membrane; a pressure sensor "51" for detecting a gas pressure of the hydrogen on the anode side of the fuel cell stack; valves "24" & "25" for closing off the anode side of the fuel cell stack when the supply of hydrogen and air to the fuel cell stack is stopped, wherein the control unit "100" also obtains a gas pressure decrease amount of the hydrogen sealed on the anode side by the anode side being closed off by the valves "24" & "25".

However, Yoshida does not expressly teach calculating a second consumption amount of the oxidization gas on the cathode side and determining whether the second consumption amount is greater than a second reference value that is set to a value smaller than the first reference value.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tony Chuo whose telephone number is (571)272-0717. The examiner can normally be reached on M-F, 9:00AM to 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jennifer Michener can be reached on (571) 272-1424. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TC

/Jennifer K. Michener/

Supervisory Patent Examiner, Art Unit 1795